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# THE FARM INDEX

July 1969

**Heigh Ho,  
Come to the Fair**  
*also in this issue:*

*Water's Worth  
On the Vertical Horizon  
Old World Supermarketing  
Meditations at  
the Meat Counter*

U.S.  
Department  
of Agriculture  
Economic  
Research  
Service

TRI-AGENCY READING ROOM

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## THE AGRICULTURAL OUTLOOK

*Consumers want more, get more, and pay more for farm products.* Supplies of most livestock products and crops for the rest of 1969 will be larger than last year. But domestic consumer demand is running strong, too. Average farm product prices through May were 5 percent higher than a year earlier, and for 1969 are expected to average 3 percent or more above 1968. As a result, a moderate increase in cash receipts is in sight for the year as a whole.

*One expected beneficiary of expanding consumer demand: the wool industry.* U.S. wool production in 1969 has dropped off along with sheep numbers. If demand for wool continues firm as expected, prices will probably remain above year-earlier levels through most of 1969.

*About food.* Though our after-tax gain in personal income slowed somewhat in the first quarter of the year, food buying continued strong. The first-quarter rate of spending (6½ percent above the same period in 1968) climbed to a \$105 billion rate—and that doesn't include alcoholic beverages.

*Strong appetite for meat boosts broiler demand.* Rapidly rising consumer incomes and low unemployment levels have strengthened demand for meat. And broilers are sharing this strong demand. Even with this year's increased supplies of red meat and substantially larger broiler production, broiler prices have been higher than last year's level.

*Egg production breaks upward.* Slightly more eggs are in sight this summer than last, and moderately more are due this fall, too. The larger number of pullets started through February will probably mean more layers this summer than last year. And the rate of lay is also expected to be up.

*May milk production smallest in years.* U.S. milk production in May, estimated at a little

over 11 billion pounds, reached a 30-year low for that month—about 2 percent less than a year earlier. Output per cow averaged 869 pounds—only 1 percent above the previous May.

*Fiscal fall-off in U.S. farm exports.* Our exports of farm products for the fiscal year ending June 30, are now estimated at about \$5.8 billion. This shortfall from last fiscal year's \$6.3 billion is due in large part to trade tie-ups that were caused by the U.S. dock strikes.

*On the tobacco scene.* Total cigarette production in this country is tabbed at 575 billion cigarettes for 1968/69—according to latest estimate—up about 1 percent over the previous year. During the same period, U.S. smokers consumed an estimated 546 billion cigarettes, up fractionally from 1967/68 despite higher retail prices and anti-cigarette publicity.

*In Europe, unfavorable spring weather has dampened grain harvest prospects.* Though a sizable crop is still expected, the wheat harvest in the European Economic Community is likely to fall below the 1968 record of 32.2 million metric tons.

—A wet spring in France reduced plantings of soft wheat substantially.

—West Germany's total wheat output, estimated at 6 million metric tons, will also be down from last year.

—Italian durum wheat may be up about one-tenth from last year, but a combination of bad weather conditions is expected to reduce the rest of the Italian wheat harvest.

*EEC feed grain situation less clear than wheat picture.* French corn output will probably be up from last year because weather caused many farmers to switch from wheat. Italy's corn crop may reach 4½ million tons—up about 15 percent from last year—and its barley crop is also expected to be up about one-tenth over 1968. West Germany, too, looks for a slight increase in its barley harvest this year.

# WATER'S WORTH



*How many times should a Florida citrus grower irrigate to get the biggest return on irrigation dollars? It depends on his crop and the watering system he uses.*

Turning on the water tap in a Florida citrus grove can be an expensive proposition.

For a single irrigation, the cost can be as high as \$55 an acre. Of course, the average cost falls as the number of times water is applied increases. But how often during the season should water be applied?

Scientists at the Florida Agricultural Experiment Stations worked 6 years to determine citrus yield response to irrigation and, more recently, they examined the economic meanings of these citrus experiments.

They studied the costs of installing and operating four types of sprinkler irrigation systems commonly used in central Florida: perforated pipe, portable guns, self-propelled guns, and permanent over-tree setups.

They studied the yield response to the frequency and timing of irrigation for four types of citrus—Marsh grapefruit and Hamlin, Pineapple, and Valencia oranges.

And finally they worked out the return per dollar of irrigation cost that growers might expect.

Here are some of the highlights of the study findings, based on the costs and returns for a 60-acre grove:

—A low level of irrigation is usually uneconomic and was for Florida growers, because of the high fixed cost of sprinkler equipment. It ranged from about \$37 an acre for perforated pipe and self-propelled gun systems to \$55 for a permanent over-tree setup.

But each subsequent watering gets more and more profitable, up to a certain point.

For example, two irrigations with a perforated pipe system boosted the total annual bill to about \$44—but lowered the cost of each irrigation to \$22. And nine irrigations in the course of a growing season cost about \$92 an acre—but only a little more than

\$10 for each watering.

With a permanent over-tree setup, each additional watering up to nine added only about \$1.30 each to the bill. As a result, two irrigations cost only \$28 apiece, nine irrigations about \$7 apiece—compared with \$55 for the first watering from the initial installation.

—Returns per dollar of irrigation cost weren't especially high for only a single irrigation, because it was so expensive. At best, growers could expect only \$3.50 back for every dollar put into irrigation. And that was for Marsh grapefruit watered with a perforated pipe system.

For Pineapple oranges, regardless of the irrigation system, the return per dollar of irrigation cost was so low with only one watering during the growing season that irrigation was not economically justified.

Generally, the three portable systems, with their lower fixed costs, yielded a higher return from only one irrigation per season than the permanent over-



tree irrigation system.

—Two irrigations, though, showed a big jump in returns. While the second application boosted costs by \$1 to \$7 an acre, the return on these added dollars was anywhere from \$3 to \$99.

The highest return was for Marsh grapefruit irrigated with a permanent over-tree system; the lowest, for Pineapple oranges with a perforated pipe system.

With two or more irrigations per growing season, the permanent over-tree system generally yielded a higher return per added dollar of irrigation cost than the portable systems.

—Three irrigations per season yielded still another rise in returns per dollar of added irriga-

tion cost. The range again was from \$3 to \$99—with the highest returns going to Marsh grapefruit with a permanent over-tree setup and the lowest returns to Pineapple oranges and perforated pipes.

—At six and nine irrigations per season, the additional return per dollar of added cost was only modest for most crops with most systems.

Going from six to nine irrigations, added returns per dollar of added cost were less than \$1 for Hamlin oranges with portable high-pressure gun and perforated pipe systems. Thus, more than six irrigations for this variety and these two systems would appear to be uneconomical. (1)

#### INCREASE IN TOTAL RETURN PER ADDED DOLLAR OF IRRIGATION COST FOR FLORIDA CITRUS GROWERS

Variety and system	Added gross returns per added total cost for irrigations per season—				
	One over none	Two over one	Three over two	Six over three	Nine over six
<i>Dollars per acre</i>					
<b>Marsh grapefruit</b>					
Permanent over-tree	2.38	98.49	99.24	29.47	9.77
Self-propelled gun	3.52	29.18	29.11	8.69	3.78
Portable gun	3.38	20.69	20.69	6.16	2.69
Perforated pipe	3.53	19.35	19.35	5.76	2.39
<b>Hamlin oranges</b>					
Permanent over-tree	1.39	57.65	58.08	43.36	3.45
Self-propelled gun	2.06	17.08	17.04	14.25	1.34
Portable gun	1.98	12.11	12.11	10.11	1.95
Perforated pipe	2.07	11.32	11.32	9.45	1.84
<b>Valencia oranges</b>					
Permanent over-tree	1.01	41.60	41.92	9.07	8.81
Self-propelled gun	1.49	12.32	12.30	2.67	3.41
Portable gun	1.43	8.74	8.74	1.90	2.42
Perforated pipe	1.49	8.17	8.17	1.77	2.16
<b>Pineapple oranges</b>					
Permanent over-tree	1.04	18.04	18.18	8.06	10.73
Self-propelled gun	1.04	5.35	5.33	2.38	4.15
Portable gun	1.02	3.79	3.79	1.69	2.95
Perforated pipe	1.05	3.55	3.55	1.57	2.63

<sup>1</sup> Ratios do not exceed 1:1; increment was not justified economically.

## U.S. Output of DDT Down, Other Insecticides Rising in Popularity

Current U.S. output of DDT, the first widely used synthetic organic insecticide, is down—about 40 percent below the production peak reached in 1962/63.

And the 40 million pounds used in this country in 1966/67 represented a drop of nearly 50 percent from 79 million pounds in 1958/59.

Farmers have been the major users of this insecticide since it was introduced commercially after World War II. They account for almost two-thirds of all the DDT used in the United States.

Over 95 percent of the DDT used by farmers in both 1964 and 1966 was applied to crops.

It is used on more farm crop acres than any other insecticide except aldrin, and it is used in larger quantities than any other insecticide except toxaphene.

For crops other than cotton—which siphons off the major portion of the insecticide—farm use of DDT declined 3 percent a year from 1964 to 1966.

And cotton growers applied 20 percent less DDT in 1966 than in 1964. (Decline in cotton acreage was, of course, a major factor.)

Changes in cotton spray programs between 1964 and 1966 indicate a general rise in the rate of insecticide use.

However, the increase in the use of toxaphene and phosphorous compounds was relatively greater than for DDT.

Analysis of 1964 and 1966 cotton spray programs also shows a rise in the use of DDT in combination with other insecticides.

DDT has been popular because it is effective, moderate in cost, and relatively safe to handle.

Though still highly effective and economical in the control of a large number of pests that destroy crops, DDT is gradually being replaced in many instances for the following reasons:

—Some insects have built up a resistance to it.

—Other insecticides are now more economical to use for certain purposes.

Such chemicals as ethyl and methyl parathion, malathion, and toxaphene are now being used by farmers on their crops in increasing quantities.

Some of these insecticides, along with still other alternative chemicals, are less safe to handle than DDT.

Some do not offer the long-lasting effectiveness of the DDT formulas.

But, in the end, they may present fewer residual problems for the farmer, wildlife, and the total environment. (3)

### Owe More, Sell More, Seems A Pattern of Successful Farmer

Who owed the estimated \$36 billion of farm debt in 1966?

Of the total, only \$29 billion was owed by actual farm operators; \$7 billion was owed by farm landlords.

Although fewer than 10 percent of all U.S. farms had both debt and gross sales of \$20,000 or more, they carried 47 percent of the farm operator debt.

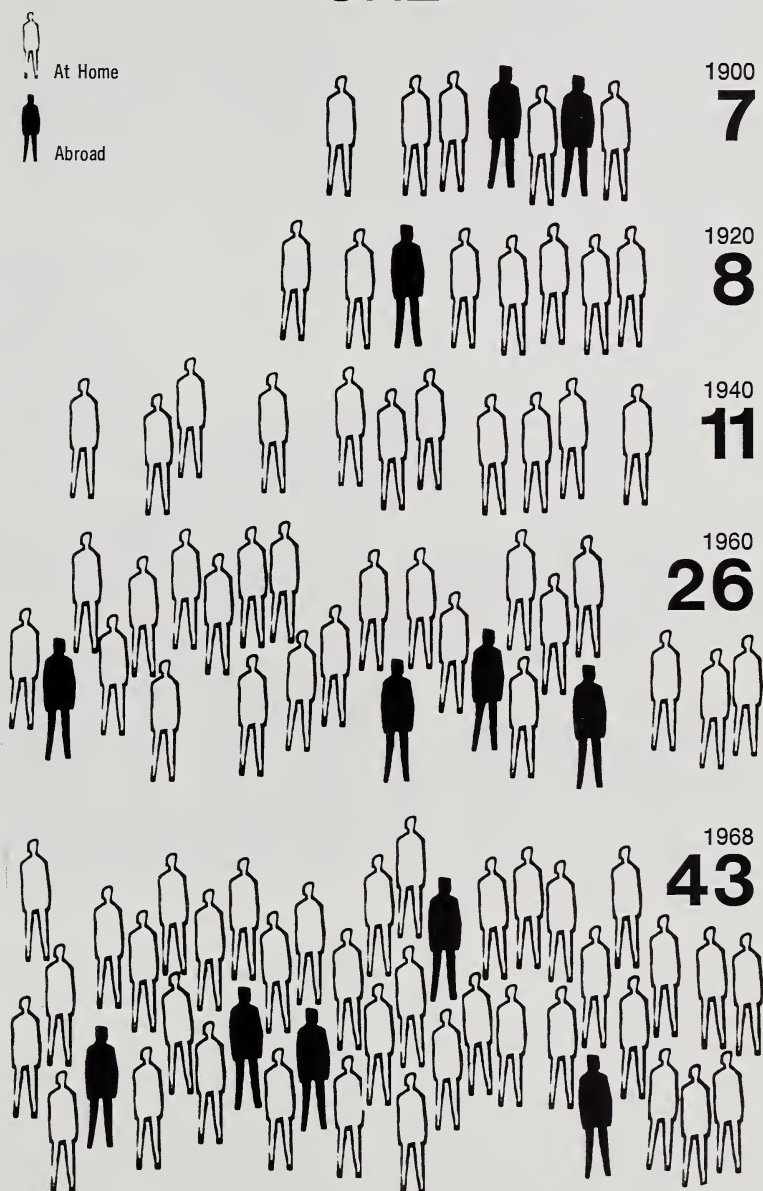
Three-fourths of all farms with marketings above \$10,000 had outstanding debt. In this sales group, gross sales per farm averaged \$19,641 for indebted operators and \$11,908 for debt-free operators.

Twenty-three percent of those operating in debt grossed \$20,000 or more, while only 12 percent who were clear of debt had gross sales of this size.

Looking at it another way, 50 percent of commercial operators free of debt grossed less than \$5,000 each, while only 31 percent of those in debt recorded sales in this range.

Commercial farms—for the most part those with annual sales

### PERSONS SUPPLIED BY ONE FARMWORKER



**THE MUNIFICENT MAN:** At the turn of the century, the average farmworker in the United States produced enough food, fiber, and tobacco for himself and 6 other persons. In 1968 the figure came to 43 persons, including the farmer and 5 persons living abroad.

Gains in farm productivity have been particularly marked in recent decades. From 1900 to 1940, the number of persons supplied by one farmworker gained only 54 percent. The next 20-year span saw the number more than double. And a 64-percent increase has already occurred during the first 7 years of this decade.

Helping farmers achieve these impressive gains in on-farm productivity are the many workers in the farm input or marketing industries. Every farmworker is now backed up by more than 2 nonfarm employees located at both ends of the food, fiber, and tobacco pipeline. (5)



of farm products of \$2,500 or more—made up 67 percent of all farms. They produced 97 percent of all farm products sold and had 89 percent of all operator debt.

Sixty-five percent of all commercial operators were in debt the first half of 1966. Debt, as a percent of gross farm sales, was 65 percent for commercial farms with \$40,000 or more in sales; 86 percent for those selling \$20,000 to \$39,999; and 166 percent for those with annual sales of from \$50 to \$4,999.

The ability to repay their debts from farm earnings appeared to be much better for farm operators with sales of at least \$20,000 than for those with sales at the lower end of the scale, despite the fact that operators with larger sales had larger debts.

Part-time operators had debts amounting to 463 percent of gross farm sales, indicating that their nonfarm income provided a big part of their credit base. (4)

## Count of Lambs, Sheep Brings A Record Price, Not Mythical Sleep

Lamb prices this year are the highest since 1951 and approaching record levels as slaughter has been running sharply below 1968.

Commercial slaughter of sheep and lambs totaled 2.7 million during the first 3 months of this year, down 8 percent from a year earlier.

Reduced slaughter is expected to slow the decline in lamb numbers. The year began with 21.1 million sheep and lambs. This was a decline of about 1 million head—or 5 percent—from January 1, 1968. The decline was much smaller than the 1967 drop of 1.8 million head.

A further slowing in the rate of decline is in the offing this year.

For inventory to match last year's, however, April-December

slaughter would have to drop at least 15 percent below the previous year. And right now such a sharp decline seems unlikely.

On March 1, 12 percent fewer lambs were on feed in seven major feeding States than on the same date last year. Combining this with the January 1 figure of 14 percent more new crop lambs (born October 1-December 1, 1968), figures for spring slaughter are expected to be lower than a year earlier, but by a smaller margin than in January-March. (6)

## Ingenious Machines Shake, Rattle, And Roll Fruits, Nuts Off Trees

That strange-looking contraption with the rubber arms busily batting apples off the trees into a portable water tank isn't a science fiction movie prop.

Nor is the mechanical monster that gropes its way through a cherry orchard gripping each tree trunk and shaking fruit onto a canvas frame.

Nor is the machine that aims an air stream at blueberries and gently blows them into a box.

These contrivances not only exist, but along with many other equally improbable-sounding machines, are beginning to mechanize an area of agriculture long thought unmechanizable: the fruit and nut harvests.

In some cases trees and vines must be made over to accommodate machines. Horticulturists already have turned peach trees into umbrella-like structures and apple and citrus orchards into long hedgerows.

Planting, spraying, fertilizing, pruning, thinning, farm grading, and packing are also mechanized for many fruit and nut crops.

Thus, it is not surprising that the average number of man-hours required per bearing acre of all fruits and tree nuts dropped 10 percent from 1954 to 1964—de-

spite generally larger crops in 1964.

Many factors determine the amount of labor needed for fruit and nut crops. Some of the most important are:

- Number of trees per acre.
- Size and shape of trees.
- Resistance of the fruit to insects and disease.
- Growth habits of the fruit.
- Adaptability of fruit to the climate.
- Size of the fruit.
- Yield per acre.
- Resistance to bruising.
- Adaptability to mechanization and efficient marketing methods.

By weighting these and other differences between crops, USDA economists determined that production of all U.S. fruits and tree nuts in 1964 required an average of 100 man-hours per bearing acre.

Noncitrus fruits still require the most labor. As a whole, they used 129 man-hours per acre in 1964. The range was from 56 man-hours of labor for avocados to 394 for dates.

For some of the fast growers, such as apricots and pears, over half of all preharvest labor must be spent in pruning. Other trees need very little or no pruning but may require heavy labor inputs for irrigation or frost protection.

Citrus fruits demanded 96 man-hours per acre, or slightly less than the 1964 all-fruit-and-nut average. The larger citrus fruits—oranges and grapefruit—required significantly less labor per acre than the smaller lemons and limes.

Tree nuts, which generally adapt more easily to machines, usually take less intensive culture and have a lower yield per acre. They took only 34 man-hours of labor per acre.

That was 66 percent fewer man-hours than the all-fruit-and-nut average. The range was from 17 man-hours for wild pecans to 59 for almonds. (7)



# Heigh Ho, Come To The Fair



*America's agricultural fair has changed its dress and direction since colonial days, but it still offers something for everybody—city onlooker or rural participant.*

Dad is scrubbing down the hog. Mom is labeling her piccalilli relish. Bub's picking out his best and biggest pumpkin. And Sis is putting the last stitch in her hand-pieced quilt.

Meanwhile up the road, the lights have been strung at the fairgrounds. The livestock barns have been whitewashed, the race-track dragged. The fat lady, the ferris wheel crew, and their car-

nival friends are due momentarily on the Midway.

The stage is just about set for one of the greatest shows on earth—the County Fair. Or maybe it's the State Fair or a regional or national show.

And it still holds a unique place in the lives of many rural families—though many others now rely on the twist of a radio or TV dial for entertainment and agricultural "education."

The concept of agricultural fairs and shows was transplanted to the American colonies from Europe, where market fairs had brought buyers and sellers together for centuries.

The first formal U.S. agricultural show was probably in 1803 when George Washington Custis followed English examples by inaugurating the soon-famous Arlington Sheepshearing in Virginia. Custis gave prizes for the fastest man with the shears, the best sheep and wool, and manufactured goods that were "Made in USA."

A year later just across the Potomac River, the City of Washington started semiannual exhibits and sales of livestock and domestic products. Only three were held.

In 1809 another series of semi-annual shows was launched by

the Columbian Agricultural Society—with members from D.C., Maryland, and Virginia.

Prizes at these fairs were substantial—such as \$30 for the best pair of fine woolen blankets, the same for fine cotton blankets, and \$60 for the best bull.

And at the 1812 spring fair, field trials determined awards for the best three-horse, two-horse, and weeding plows.

The Columbian fairs were not only gay but prestigious. Among the regulars was President Madison, who on one occasion wore his homespun inauguration suit. General Mason, then U.S. Indian Agent, wore a suit made from nankeen cotton grown not far from the White House—on Ananostan Island (now Theodore Roosevelt Island) in the Potomac.

The boundaries of America's fairgrounds might have stopped where they started had it not been for one Elkanah Watson. This prominent Bay Stater envisaged an agricultural society and fair that would appeal to the working farmer and become a permanent institution. (See "Men and Milestones," page 10.)

The Berkshire Agricultural Society founded in 1811 by Mr. Watson served as a prototype for many similar groups that emphasized direct farmer participation.

They relied heavily on fairs and prizes to encourage improvements in agriculture, and there was a nationwide wave of livestock shows and agricultural fairs in the following decade.

But most of the fairs and their sponsoring societies foundered on financial shoals between 1825 and 1840.

Interest in fairs was revived, however, in the 1840's—an age of agricultural improvement. New support from State governments was a stimulus.

New York staged the first big State fair in 1841. Michigan followed in 1849. Pennsylvania, Ohio, and Wisconsin got their events underway in 1851. Indiana

opened its fairground gate in 1852, Illinois in 1853, and Iowa and California in 1854.

In spite of free transportation on many railroads, it wasn't easy for a farmer to get his livestock or fruit or other products to an exhibit far distant. So many of the early county and State fairs changed sites from year to year and went to the farmers. By 1900, however, most State fairs had a fixed location and buildings.

Even earlier, many fairs and shows were beginning to stress



special types of exhibits instead of regional locales.

For example, today's major flower show (the International, held yearly in New York) stemmed from a Boston flower show of 1829.

The first poultry show also was held in Boston, in 1849.

Livestock was important in the early fairs, and its separate shows in most cases have always been the most spectacular specialized exhibits. For one, the International Livestock Exposition

held yearly at Chicago in December, traces its history to the American Fat Stock Show of 1878 in the Windy City.

A bit later, in the early 1900's, the agricultural fair in its broader concept was revitalized in another way: the development of participating boys' and girls' rural groups—forerunners of today's zestful 4-H Clubs and the Future Farmers of America.

Since Fair Week used to rank with Christmas and the 4th of July on the rural holiday calendar, amusements inevitably became an early and integral part of the fair.

Guessing the weight of fat stock was fun (and helpful, too, as scales were scarce). But a horse race was more exciting. It early proved a permanent and a colorful attraction. In 1895, the Wisconsin State Fair paid \$3,000 for a special race between "the pacing kings" John R. Gentry and Joe Patchem. It was considered a good investment.

And horseracing, along with cotton candy and merry-go-rounds, continue to be crowd pullers today as they were a century ago.

But "velocipedestrianism" has given way to drag racing. Balloon ascensions have been supplanted by stunt flying. The traveling photographer has ceded his spot to the coin-operated machine. And the sharp shooter now wins a plush panda instead of a plaster kewpie doll.

Meanwhile, string beans have lost their strings. Corpulent swine have grown svelte. Big fat hens have ceded their ribbons to dainty little broilers. And in the machinery displays, the old manure spreader has been displaced by sacks of fertilizer.

Yes, it's true. America's agricultural fair has changed its dress and its direction over the years—like the society of which it is a part. But it's still a significant institution that's likely to be around for years to come. (8)





# 1969 Calendar of Fairs\*



NAME	PLACE	ATTENDANCE 1968	DATES 1969
International Livestock Exposition	Chicago	300,000	Nov. 28-Dec. 6
<b>Regional fairs:</b>			
Eastern States Exposition	West Springfield, Mass.	703,034	Sept. 12-21
Mid-South Fair	Memphis, Tenn.	704,915	Sept. 19-27
Mid-American Fair	Topeka, Kan.	375,000	Sept. 5-10
Southwestern Exposition	Fort Worth, Texas	513,661	Jan. 24-Feb. 2
<b>State fairs:</b>			
Florida State Fair	Tampa	550,000	Feb. 1-15
Illinois State Fair	Springfield	1,097,517	Aug. 8-17
Indiana State Fair	Indianapolis	850,000	Aug. 22-Sept. 1
Iowa State Fair	Des Moines	550,512	Aug. 15-24
Kentucky State Fair	Louisville	493,477	Aug. 14-23
Louisiana State Fair	Shreveport	564,000	Oct. 17-26
Maryland State Fair	Timonium	320,000	Aug. 25-Sept. 1
Michigan State Fair	Detroit	925,264	Aug. 22-Sept. 1
Minnesota State Fair	St. Paul	1,457,829	Aug. 23-Sept. 1
Montana State Fair	Great Falls	213,978	July 26-Aug. 2
Nebraska State Fair	Lincoln		Aug. 29-Sept. 4
New Jersey State Fair	Trenton	565,000	Sept. 13-21
New York State Fair	Syracuse	563,815	Aug. 26-Sept. 1
Ohio State Fair	Columbus	1,652,074	Aug. 19-Sept. 1
Oklahoma State Fair	Oklahoma City	925,106	Sept. 20-28
	Tulsa	1,028,008	Sept. 26-Oct. 5
Oregon State Fair	Salem	229,647	Aug. 23-Sept. 1
South Dakota State Fair	Huron	238,640	Aug. 29-Sept. 3
Texas State Fair	Dallas	3,014,114	Oct. 4-19
Virginia State Fair	Richmond	624,325	Sept. 19-28
<b>County and other fairs:</b>			
Alabama: South Alabama Fair	Montgomery	180,000	Oct. 6-11
Alaska: Tanana Valley State Fair	Fairbanks		August
Arkansas: Yell County Fair	Danville	9,383	Sept. 15-20
California: Los Angeles County Fair	Pomona	1,236,719	Sept. 12-28
Florida: Greater Jacksonville Fair	Jacksonville	410,930	Oct. 15-25
Idaho: Eastern Idaho State Fair	Blackfoot	150,000	Sept. 8-13
Iowa: Clay County Fair	Spencer	235,000	Sept. 6-13
Maine: Windsor Fair	Windsor	30,000	Aug. 25-Sept. 1
Maryland: Frederick County Fair	Frederick		Late Sept.
Montgomery County Fair	Gaithersburg		Aug. 18-23
Massachusetts: Three County Fair	Northampton	85,662	Aug. 31-Sept. 6
Michigan: Ionia Free Fair	Ionia	522,000	Aug. 2-10
Minnesota: Steele County Fair	Owatonna	197,764	Aug. 12-17
New Hampshire: Deerfield Fair	Deerfield	125,000	
New York: Erie County Fair	Hamburg	448,205	Aug. 15-23
North Dakota: Red River Valley Fair	West Fargo	102,965	Aug. 15-21
Ohio: Cuyahoga County Fair	Berea	251,844	Aug. 10-17
Pennsylvania: York Interstate Fair	York	231,201	Sept. 9-13
Kutztown (Pa. Dutch)	Kutztown	100,000	Aug. 18-23
South Carolina: Coastal Carolina Fair	Charleston	145,000	Oct. 27-Nov. 1
Tennessee: Tennessee Valley Fair	Knoxville	230,107	Sept. 5-13
Obion County Fair	Union City	76,012	Aug. 25-30
Texas: Heart O'Texas Fair	Waco	327,000	Oct. 30-Nov. 5
Virginia: Prince William County Fair	Manassas	85,000	Aug. 11-16
Washington: Spokane Interstate Fair	Spokane	176,709	Sept. 6-14
Clark County Fair	Vancouver	68,000	Aug. 13-17
Wisconsin: Walworth County Fair	Elkhorn	107,816	Aug. 28-Sept. 1
Shawno County Fair	Shawno	34,135	Aug. 29-Sept. 1

\* Selected, representative exhibits.



### *Men and Milestones*

#### FOUNDER OF AMERICA'S AGRICULTURAL FAIR

*It's 1807. And a pair of fine-wooled Merino sheep exhibited on the public square of Pittsfield, Mass., are attracting big crowds. Up to now, the breed has rarely been seen outside Spain. The owner of the two-animal show is Elkanah Watson. He's a former banker, canal promoter, and wool manufacturer, whose retirement hobby is improving agriculture—particularly through the application of science and the introduction of better livestock and seeds.*

\* \* \*

Elkanah Watson, 44, had seen a good bit of the world by the time he settled down to farming in 1802.

Native of Plymouth, Mass., he'd started his career in Providence, R.I., as apprentice to businessman John Brown. His business ventures prospered thereafter in Nantes (France), Edenton, N.C., and Albany,

N.Y., before he became a gentleman farmer in Pittsfield.

After his small but successful sheep exhibit, Watson decided that neighborhood farmers would welcome a get-together to improve agriculture if there was a focal point for such activity.

He invited farmers to join a cattle show in 1810. Then he asked them to join a Berkshire Agricultural Society that would hold county fairs regularly. And in 1811 the society sponsored America's first county fair, at which prizes were given for the best livestock and crops.

The idea spread rapidly. It was the direct forerunner of present-day agricultural fairs.

Watson continued to encourage fairs, and in his later years had a wide circle of agricultural correspondents. Before his death in 1842, he was able to chronicle in an autobiography a number of the agricultural improvements he helped bring about. (9)

## Adequate Plumbing a Pipe Dream Still for Many South Carolinians

A master bath. A powder room. A sunken tub. A sauna bath.

These are what many American families dream of adding to their homes in the way of plumbing facilities.

But there are still other Americans for whom hot and cold running water, a tub, a toilet, and a decent sewerage system would be the height of luxury.

For example, one of every two rural homes in the northeastern coastal plains area of South Carolina lacks the plumbing facilities most of us take for granted. And inadequate plumbing not only makes life less comfortable for these folks—it poses a chronic threat to community health.

What would it cost to bring plumbing facilities in the area up to par? About \$49 million, according to a recent ERS study of the area.

About 47 percent of the homes could be equipped with needed plumbing and bedroom space for less than \$3,500 per home. Another 47 percent need \$3,500 to \$5,499 worth of improvements. The remainder require more than \$5,500 apiece to fix up properly.

Almost four-fifths of the homes lacking plumbing were occupied by Negroes and nearly three-fourths of these homes were rented. But about 60 percent of the renters paid "no cash rent."

These no-rent homes usually are leftovers of tenant and share-cropper systems where the landlord provided housing for his farm labor.

Because of mechanization, the labor is no longer needed but the landlords have not evicted former field hands. However, landlords don't have much incentive to make improvements, and tenants generally lack the means to do so.

Thus, there is little likelihood that many of the needed improvements will be made without



public help of some sort.

The number of these sub-standard homes that continue to be occupied changed very little from 1950 to 1966. Since they continue to be occupied, it may be necessary to offer owners a financial inducement to remodel the dwelling places of their no-rent tenants.

Remodeling the area's rural homes, in most cases, would be cheaper than building new homes for all families now in sub-standard dwellings. Construction of new housing would run at least \$10,000 per house. (10)

### Laws That Lighten Farmland Taxes Increase Assessors' Work Load

Differential tax treatments for farmland may be a help to farmers, but they're generally a headache for property tax administrators.

Experiences of a number of States with differential tax laws on the books show that it's far from easy to define farmland for tax purposes.

In Maryland, for example, tax assessors have a list of 29 criteria for determining the eligibility of farmland for preferential tax treatment.

Among other items, assessors check on the zoning applicable to the land, the general character of the neighborhood, the property's proximity to metropolitan areas and services.

They find out whether the farming operation is conducted by the owner or by another person for an absentee landlord.

They check on the land's agricultural productivity, the cropland acreage, the land planted to each crop, the number of livestock or poultry (by type), the ratio of agricultural land to land in other use.

They inventory buildings, machinery, and equipment, and the condition of these items. And

they find out the amount of fertilizer and lime used in the farming operation.

Not all States according farmland special tax treatment have as extensive a list as Maryland. But assessors need explicit guidance. And the less explicit the tax law, the more difficult it is for the tax assessor to decide which land deserves differential tax treatment.

The whole structure of differential assessments of farmland is based solely on a determination of the land's value in agriculture, ruling out any value accruing from other uses.

In theory, this is a simple process. In practice, it is not—particularly on the urban fringe.

Tax assessors prefer to check their assessment against actual sales figures for comparable land. But as cities reach out, it often is impossible to locate any sales of comparable property in which the sale price reflects only the agricultural use. (12)

### What Color Green?

Hardly anybody wants to live in a gray concrete world unrelieved by the green of nature.

But in averting this possibility, cities must determine what kind of greenery and open space they want to preserve where.

Farmland on the urban fringe is greenland that can teach city people about agriculture in action. It can be used to channel a city's growth patterns. And it provides a welcome relief from urban sights and sounds.

But for planning purposes, fringe farmland isn't the same shade of green as public parkland. It's not open to urbanites for picnicking, for hiking, for partaking of the beauties of nature.

So, while farmland is greenland, it may not always be the best shade of green for coloring urban environs. An area considering preferential tax treatment for farmland around cities must take this into consideration. (11)

### Most Hired Workers on Farms Have Other Roles in Off-Season

They don't live on farms and they don't count farmwork as their chief activity.

That's the general portrait of hired farmworkers in 1968. And a very different picture it is from the late 1940's.

Then, two-thirds of the Nation's hired farm work force lived on farms, compared with only 27 percent last year. And two decades ago, roughly three-fifths of the noncasual hired farmworkers were engaged principally in farming, compared with only two-fifths in 1968.

Of the roughly 2.9 million different persons who did some work on farms for cash wages in 1968, about 1.3 million were classified as casual workers (who did less than 25 days of farm wage work). The remainder were noncasual.

In all, the 1968 hired farm work force was about 5 percent smaller than that of 1967.

Otherwise, last year's hired farm work force differed little from that of the year before. It was primarily male. More than three-fourths of the workers were white. More than half (primarily housewives and students) were not in the labor force most of the year.

A tenth of the workers did some farm wage work outside their home counties in 1968. These, considered domestic migratory workers, comprised about the same share of the total as they did in 1967.

The South was home for about 46 percent of last year's hired farmworkers. Twenty-six percent lived in the West, 19 percent in the North Central States, and 9 percent in the Northeastern States. This was about the same as in 1967, indicating there was little change in the distribution of agricultural activities in the country during the period. (13)

*What's ahead for food marketing? More use of vertical coordination by contract or ownership is one likelihood, to insure smooth passage of food from farm to shelf.*

Way back when, the owner of the general store might promise to buy all of Mrs. McGillicuddy's eggs for an agreed-upon amount of cash or credit. In return, Mrs. McGillicuddy would promise to bring all her chicken eggs to the general store.

It's unlikely that these egg traders had ever heard of "vertical coordination in marketing." But that's the system they'd actually adopted.

And in doing so, they eliminated some of the uncertainty that goes along with agricultural marketing.

Most farm products are bought and sold a number of times—by processors and wholesalers—before they reach the consumer.

Traditionally, the majority of our farm crop and livestock producers and traders operate under open market conditions without any guarantee of sale. This situation still dominates the production and marketing of many commodities including wheat, feed grains, and hogs. But for others, the open market system is being modified in favor of tighter marketing coordination.

Along with the technological revolution in farming has come an organizational revolution in the food processing industry.

Production, processing, and distribution are being meshed to facilitate the mass merchandising of highly uniform food products the public is used to.

This means a greater capital investment and highly sophisticated equipment. And with this much at stake, managers have to find ways to cut down on the element of uncertainty in the marketplace.

One way is to coordinate the interdependent activities of the

**On the  
Vertical  
Horizon**





marketing system. Contract production is an increasingly popular way of doing this. The terms and conditions of sale are contracted well in advance of the sale date—sometimes before a livestock producer buys his stock or a farmer plants his crops.

Generally, the farm product markets using contract production involve fewer, larger buyers than those with open production arrangements.

And there are cooperative marketing or buying associations in which members work together to coordinate stages of the marketing process.

In some cases, a company may integrate two or more steps in the production-processing sequence by gaining ownership rather than by contracting for products or services.

Here's how these various forms of vertical coordination have worked in some commodity sectors.

*Livestock.* More cattle, hogs, and sheep have been sold direct from farm or feedlot to packing house in recent years.

This cuts out the intermediate step of the auction or terminal market and has boosted the growth of the commercial feedlot.

Custom or contract feeding is growing in southern California, Arizona, and West Texas.

These feeding arrangements for cattle may involve commercial feedlots and farmers or ranchers, or they may be between packers, chainstores, and commercial feedlots.

In any case, a steady flow of slaughter cattle is assured.

Formula pricing between meatpackers and retail firms is another way to reduce uncertainty. A base price is agreed upon before slaughter, and later adjusted by premiums and discounts according to carcass quality.

Some meatpackers and a very few food retailers feed their own cattle, thus coordinating the proc-

essing sequence by ownership.

Between 10 and 15 percent of cattle fed in the Far West, Southern Plains, and Southwest were owned by meatpackers in 1967. The number owned by food retailers was much smaller.

Some contract feeding is being used in the production of pork and lamb.

*Poultry and eggs.* Various types of contracts have been used to market poultry and eggs.

A contract in which almost all of the price risk is assumed by the contracting firm is used almost exclusively for broilers. And it's a heavy favorite in turkey and egg production.

The contractor furnishes the chickens or turkeys and the feed, and actually retains ownership of these production inputs. The grower furnishes housing, equipment, and labor.

About 95 percent of our broilers, 60 percent of our turkeys, and close to 35 percent of our eggs are produced under contract or actual ownership of production by the processor.

*Fruits and vegetables.* Vertical coordination is old hat to producers and traders of fruits and vegetables for processing.

In 1964 freezers and canners ensured about 70 percent of their supply requirements through contract arrangements.

Today nearly all lima beans, green peas, sweet corn, and most of the tomatoes used for processing are produced under contract with processors.

Produce grown for fresh sale has less formal coordination, but probably half of the production is assisted by some form of contract or coordination at certain stages.

For example, a grower-shipper combines the functions of growing, packing, and shipping-point selling under one ownership.

Cooperatives play a major role in marketing citrus crops and are growing more important in processing deciduous fruits.

The broiler, fluid milk, and vegetable seed industries would come first if you lined up farm commodities according to the degree that contracts or vertical integration influence their production and processing. At the other end of the line you'd find wheat, feed grains, and cotton.

Vertical coordination has so far been more important for commodities that are highly perishable or lend themselves to production line processes.

The food industry is committed to mass merchandising of retail food. So vertical coordination by contract or integration will probably advance as a way to assure orderly food production and satisfy increasing demand. (14)

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### Automated Pricing, Stock Control For Supermarkets of the Future

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If a grocery store manager had an automated price scanner at his checkout counter, and the scanner was connected with a central computer for the store, and this computer system was connected with the food chain's warehouse—then the warehouse computer could order replacement merchandise direct from the supplier's computer.

A retailer could bargain and contract for a year's supply of a product at a single wholesale price, leave the stock in the warehouse, and call in electronically for deliveries.

(Such a system—envisaged as a long range prospect for agribusiness—would work best with durable groceries like canned food, paper products, and soap. For such items, price changes per year are relatively slight at the wholesale level.)

Since the processor would know how many units the firm would purchase for the entire year, he could mark prices on every can or package.

And the retailer could have his

total order marked with several different retail prices to implement his variable price merchandising strategies for the whole year.

As computers come into more common use, increased efficiency in handling, transporting, and merchandising durable grocery items should contribute substantially to lower costs. (15)

### Smaller Milk Processors Losing Out on Big Chain Store Accounts

About all a milk can is good for now is "authentic Americana."

But cows are still in business and people are still drinking milk. It's the marketing between the cows and the people that's been changing.

The growth of retail food chains has changed the buyer-seller relationships between food stores and fluid milk processors. Food chains are adopting centralized milk programs—often purchasing all their milk in one area from a single processor—sometimes with their own private labels.

Because of their size, food chains are in a good bargaining position and able to specify the major terms of their contracts with processors.

They can initiate and merchandise private brands, restrict the number of processor brands stocked, and may even have the resources to start their own processing plants.

A recent survey of milk processors and food chains in the 12 North Central States and Kentucky centered upon processor problems and the extent of central milk buying and merchandising programs by food chains.

In Illinois and Indiana, 59 out of the 99 food distributors had their own central milk programs. They operated or were associated with approximately 6,700 stores—of which a little more than half

were supermarkets.

The food chains save money by mass purchasing from fewer suppliers of milk. And private label brands give them greater freedom to shift their sources of supply and also enable them to control pricing and merchandising.

Competition among milk processors for food chain accounts has stiffened because of the large volume purchasing represented.

The problems that milk processors face, according to the survey, include smaller profits in processing and distribution, greater risks because of the large size of each account, growing dependence on food chains for business, and reduced effectiveness of their own brands.

Small-scale milk processors have lost their food chain accounts. The survey showed that nearly half of those with monthly sales of less than 500,000 pounds of milk had not sold milk to supermarkets during the last 5 years.

One way out of this problem is to consolidate for greater size.

More than one-fourth of all processors, and nearly half of those with monthly sales over 2 million pounds, reported that they had been involved in consolidation or a merger during the preceding 5 years.

In Illinois, for example, the number of fluid milk processing plants dropped from 152 to 97 between 1964 and 1969, while the proportion with daily volume of over 5,000 gallons increased from 32 to 45 percent.

This trend to larger size, coupled with increasing automation, has set the stage for substantial boosts in output per man-hour in plant operations.

Another important adjustment has been the appearance of dairy stores and convenience markets—groceries on less than supermarket scale. Stores of this type were the most important outlet for 10 percent of the processors

in the survey. Most of these processors had monthly sales of less than a million pounds.

And some processors have diversified into nondairy operations. A quarter of them said they had made such an adjustment during the past 5 years, while another third planned to move in this direction during the next 5 years. (16)

### Commercial Rice Drying Costs Are at Their Lowest in California

The lowest cost area to dry, store, and handle rough rice is California, according to a recent ERS report.

The study is based on 32 drier-storage firms selected from the three principal U.S. rice producing areas: Arkansas-Mississippi, Texas-Louisiana, and California.

Drying costs alone were highest in California in 1966—15.1 cents per hundredweight—and lowest in Texas-Louisiana—10.5 cents.

But the total operation—receiving green rice at the driers, drying, storing, and loading out—was most economical in California.

The reason why? Rough rice is stored slightly longer there—making for a more efficient use of low-cost flat storage.

Averages of total costs for the four-step operation per hundredweight were 55.8 cents in California, compared with 72.8 cents in Texas-Louisiana and 73.5 cents in Arkansas-Mississippi.

Loading out for rail instead of truck transit brought costs down slightly to 71.6 cents in Arkansas-Mississippi, but had little effect on costs in the Texas-Louisiana region.

The big cost items for commercial drier-storage firms are depreciation, interest, direct labor, and overhead. These made up about 70 percent of operating costs. (17)



## Cereals Soak Up Major Portion Of Rise in Milled Rice Supplies

Few June brides realized where that rice had been before it got to their weddings.

It had all gone through mills and packaging plants—where most of it is prepared not for weddings but for direct food use. But some is channeled from there to food processors to be made into cereals, soups, baby foods, and other products. And some goes into beer.

U.S. farm production of rough rice has jumped from 3.9 billion pounds in 1950 to over 10.5 billion pounds in 1967.

Though a large amount of this was exported after milling, it also represented a sharp rise in domestic use and a bigger job for U.S. processors, marketers, and distributors.

Recently, ERS conducted a survey of mills and repackagers to gather information on the patterns of rice distribution in the United States. The survey covered the marketing year from August 1, 1966, to July 31, 1967.

With the exception of mills in New Orleans and San Francisco, mills were located in or near rice production areas—while repackagers generally were closer to consuming centers.

Rice distributed for direct food use in the United States amounted to 1.1 billion pounds in 1966/67, or over 64 percent of all rice distributed domestically.

Most of this rice was distributed direct from rice millers to wholesale, retail, and institutional outlets.

The rest reached consumers through repackagers and government programs.

Food processors took in another 17 percent of the rice milled, about 296 million pounds, mostly for cereals. Smaller amounts ended up in canned rice, baby foods, and soups.

Breweries accounted for the

rest of rice use—just over 300 million pounds.

The total amount of milled rice distributed in 1966/67 was up 65 million pounds from 1961/62. Of this increase, 60 percent went into cereal, 21 percent to other processed foods, and 19 percent to breweries.

The Middle Atlantic, Pacific, West South Central, and South Atlantic Regions took 78 percent of all the rice shipped in 1966/67. They rank as the top four regions in per capita distribution of rice.

Three States alone—New York, California, and Louisiana—accounted for over 35 percent of the total.

Vermont and Wyoming ranked last, with less than a tenth of a percent each.

Slightly over half the rice that went for direct food use—excluding government programs—was shipped in consumer-size packages of 5 pounds or less. An-

other 20 percent went out in packages ranging from 5 to 25 pounds.

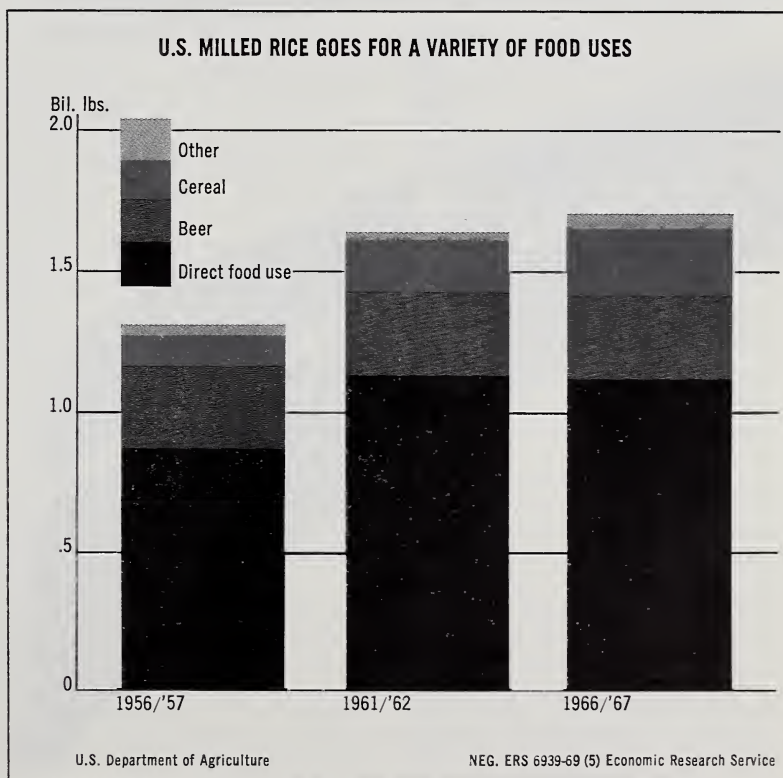
The larger size packages headed for those areas where people eat the most rice. The top five States in per capita rice distribution marketed 60 percent of their rice in packages weighing over 5 pounds.

Specialty rices were most popular in regions where rice was not a traditional staple.

Those parboiled, precooked, or otherwise specialized varieties may have more appeal to people who aren't regular rice eaters since they're usually easier to prepare.

In New England, specialty rice made up 39 percent of the total while in the West South Central Region—rice country—it was only just over 8 percent.

Nationwide, specialty rices made up a sixth of the rice distributed for direct food use. (18)



## Old World SuperMarketing

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*Eastern, Western habits change as Europeans and Japanese turn to modern supermarkets for their shopping—presenting a new challenge for U.S. food exporters.*

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There's more than a cathedral bell tower overshadowing the old, farmers' markets in European squares these days.

Supermarkets and shopping centers are springing up on the outskirts of many towns and cities and luring away the markets' steady customers.

Though the setting is different, the story is much the same in Japan.

For American exporters of food and agricultural products, the developments in the food marketing systems of Western Europe and Japan offer opportunities as well as challenges.

Rising consumer incomes abroad are increasing demand for more variety in foods, more convenience, higher quality—which the U.S. food industry is equipped to deliver.

On the other hand, modern marketing developments abroad—and the changing competitive environment they create—present a challenging situation for U.S. firms.

To evaluate future markets for U.S. products abroad, and develop effective export strategies and techniques, American food exporters will find it helpful to take a close look at the peaceful revolutions in foreign marketplaces.

More than 6,500 supermarkets are operating in Western Europe—where there were none 10 years ago. Several new ones are opened each week.

Most of them have about half





the sales area and a third the assortment of a typical American supermarket, but many larger ones are under construction.

In addition, several huge discount department stores with supermarket-size food sections have been opened in the last few years.

The number of smaller, self-service food stores replacing the tiny, traditional shops is approaching 160,000—compared with almost none about 20 years ago.

And the picture in Japan is similar. This revolution in European and Japanese food marketing systems has been triggered by the same forces that have reshaped our American food marketing system. They are economic growth, modern technology, and associated socioeconomic pressures.

From 1956 to 1966, per capita real incomes in Western Europe rose 43 percent and food expenditures, in constant prices, increased 26 percent. At the same time, per capita incomes soared 130 percent in Japan and food expenditures rose about 45 percent.

On whichever side of the world they are, more people own automobiles and refrigerators—two major ingredients in “super” food marketing. With transportation to the store and a place to store the food safely at home, the way is open for mass production and distribution of food products. And the daily trip to the open-air market is no longer necessary.

And, as here in the United States, wage earners are heading for the cities, away from a more mechanized agriculture.

Higher pay and improved employment opportunities have cut sharply the number of domestic servants, too.

More European and Japanese women are working now—and a high percentage of them are married.

These changing ways of life are reflected in the changing patterns of food consumption.

Europeans, for example, are using more frozen foods—about 20 percent more every year. And canned and fully prepared products are taking precedence over the traditional fresh meats and vegetables.

Not many Europeans really seem to regret the loss of the little food shops and open markets. Though charming and quaint, they are often inefficient.

Consumer cooperatives and corporate food chains throughout Europe are replacing their little stores with superettes and supermarkets. Department and variety stores, as well, are increasing their share of the marketplace at the expense of the independent operator. Concentration of food sales and competition among the fewer, large firms is steadily rising.

In Sweden about a dozen food retailing organizations control stores that do about 85 percent of all food retailing. Two of them make about 45 percent of all food sales in Sweden.

Two large consumer cooperatives dominate food retailing in Switzerland.

Independent, small retailers in the Netherlands cling to only about 8 percent of the food market.

Recently, representatives of retailer-cooperatives with thousands of member stores in six European countries agreed to pool some of their purchasing operations. This is already in effect for most imported products, including such major U.S. exports as canned and frozen fruits and juices.

The wholesaling and food manufacturing system is feeling the effects of this revolution in food buying habits as well.

One result: Small firms and plants are going out of business while numbers of larger plants are going up.

Food factories in Sweden dropped from 2,085 in 1956 to 1,730 in 1965. All the decrease

was in plants with 20 or fewer workers.

In France, the biscuit industry fell from 620 to 430 companies in the 1957-67 decade while output increased from 180,000 to 220,000 tons. (19)

## Not Much Glow in U.S. Coarse Grain Marketing for 1970/71

The United States produces, uses, and trades more coarse grains—oats, rye, corn, millet, barley, and sorghum—than any other country in the world.

Our exports of coarse grains (excluding products) totaled 21 million metric tons, valued at \$1.2 billion, in 1966/67. This amounted to one-half of world coarse grain exports, and nearly one-fifth of all U.S. agricultural exports. Six years ago, coarse grains made up only one-tenth of U.S. agricultural exports.

However, U.S. preeminence assures no immunity from worry over future marketing prospects. Our exports are expected to increase in 1970/71 from the 20 to 21-million-ton level of recent years. But they are not expected to reach the unusually high 1965/66 volume of 25.4 million tons.

While world demand for coarse grains is expanding—for use primarily as feed in the developed countries and as both food and feed in the developing countries—this does not guarantee continued expansion of our foreign market.

For one thing, three-fourths of world coarse grain imports in 1966/67 went to member countries of the European Economic Community, along with the United Kingdom, Denmark, Spain, and Japan. But these big importers now produce more.

Japan is an exception. And even there it is likely that increased availability of coarse grain from Australia and Thai-

land by 1970/71 may squeeze the traditional market share of other suppliers, particularly the share of the United States.

Also, the high grain pricing policies pursued by some importing countries—such as the EEC—tend to hold down imports in two ways. They not only encourage domestic production but also dampen the demand for feed grains.

Another cause for U.S. concern is the projected export expansion by major competitors—Argentina, Brazil, Mexico, Australia, Thailand, and the Republic of South Africa.

The tremendous potential for production in some of these countries, and the dependence of others on grain sales for export earnings, point to increased competition for coarse grain markets. However, growth of the livestock and poultry industries in some of these exporting nations may tend to hold down increases in export availability.

The “world” price of coarse grains remained relatively stable between 1958 and 1961 after falling from a mid-50’s peak. It then gradually increased through 1966. The strengthening of prices reflected a rapid expansion of the livestock industry in Japan and the EEC, increased movement of grain sorghum to India, and the initiation of U.S. programs to curtail production.

The rising prices served to stimulate substantial production increases in 1966 and 1967. As a result, prices fell. And the slippage actually began in the latter part of 1966 for several of the most important feed grains.

Trends in world grain stocks reflect the supply-demand relationship as conditioned by varying price policies.

Grain stocks of major grain exporters rose steadily from 1954/55 to 1961/62—from 35.8 million tons to 84.3 million tons.

In 1961 the United States started a feed grains program de-

signed to reduce feed grain acreage, cut production, and avoid further stock buildups. As U.S. coarse grains made up about 90 percent of world stocks, this program—combined with a rapid rise in world use—caused a general decline in world stocks from 1961/62 to 1966/67.

Nevertheless, a good grain crop in 1968 led to a significant increase in U.S. stocks in 1968/69 prompted adjustments of the feed grains program to curtail production further.

The above factors do not add

much glow to prospects for U.S. coarse grain exports. The picture could, of course, be changed by widespread crop failures or unusual acceleration in world demand—such as sharply expanded feed grain imports by Eastern Europe from non-Communist countries, or an unexpected thrust to livestock expansion. But such developments seem unlikely.

All things considered, the Economic Research Service projects net imports and exports of coarse grains by major trading countries in 1970/71 as follows:

## NET EXPORTS

*Eastern Europe:* A bit short of 1.5 million metric tons, or about the same as in 1961–65. However, the net trade of Eastern Europe can change substantially from year to year, depending on the influence of weather on corn production in the Danubian countries.

*Argentina:* Some increase from the 4.2 million metric tons in 1965/66–1966/67.

*Brazil:* Exports of 1 million metric tons of corn—double the 1965–67 level, with production increases exceeding demand.

*Mexico:* Continuation of net export position, with exports of corn exceeding imports of other types of coarse grains.

*Canada:* Exports just short of 1 million metric tons, as rates of increase in use and production offset each other.

*Australia:* Net exports possibly near 1 million metric tons—an increase from the 0.8 million exported in 1965/66 and 1966/67.

*Thailand:* Net exports above the 1.2 million of 1967, pushed up by government policies that encourage expansion of corn and grain sorghum.

*Republic of South Africa:* Corn exports of 3 million metric tons—up sharply from the one-half million in 1963/64–1965/66.

*USSR:* Net exports are projected to rise to 700,000 metric tons from the 500,000 exported in 1965/66–1967/68.

## NET IMPORTS

*EEC:* About 10–12 million metric tons—somewhat below the 12.5 million net imports in 1965/66 and the 12.1 million in 1966/67.

*United Kingdom:* Close to 4 million metric tons—somewhat above earlier levels, but with increased production nearly keeping pace with increased use.

*Spain:* 2 million metric tons (mainly in corn)—or about one-half million below the estimated annual average for 1967/68–1968/69.

*Denmark:* Less than the 400,000-ton imports of 1965/66–1966/67, as increases in production exceed use.

*Japan:* 11 million metric tons—an increase from the 1965/66–1966/67 average of 6.5 million, as domestic production continues to decline and demand strengthens. (20)



*Since meat is probably the most costly item in the average family food budget, consumers may give it closer scrutiny than other foods that go into their shopping carts.*

When U.S. homemakers go shopping for meat, what do they consider?

Good quality first of all—according to over 3,000 homemakers included in a recent survey conducted by the Statistical Reporting Service.

To a lesser extent, homemakers said they choose their meats for flavor, minimal waste, and healthfulness.

None of the four meats concentrated on in the SRS survey—beef, chicken, ham, and fresh pork—passed all of these consumer tests with flying colors. But beef and chicken had an excellent “image” with most of the homemakers.

Beef, according to a majority of those interviewed, was tasty, easily digested, versatile, healthful, not tiresome, and relatively free of waste.

In fact, beef scored as well or better than the other meats investigated in all ways but one: It was found wanting when eaten cold.

Beef was reportedly served more often than any other meat studied.

Chicken was another favorite, although it was served less often than beef. It was cited as tasty, easy to digest, good to prepare in different ways, and good to eat cold. Though it was not widely criticized, its chief disadvantages, according to the homemakers surveyed, were its keeping qualities when raw and the fact that it got tiresome if included too frequently in menus.

Ham (smoked or cured pork) was credited by a majority of the homemakers as tasty and good to eat cold. Many also rated it favorably for its keeping qualities and its suitability not only for warm

weather meals but also as “company” fare.

But ham was served less often than any of the other four meats focused on in the study. Some consumers found it tiresome as a regular meat. And this may have restricted the ways in which they felt they could use it in leftovers. And ham was often considered unsuitable for weight watchers.

Fresh pork, although reportedly served more often than ham, projected a less favorable image.

Many homemakers attributed to fresh pork all the disadvantages of ham and added three more: difficult to digest, not always safe to eat, and too much waste. Many also claimed that fresh pork was not good to eat cold and that it did not keep well before cooking.

Although most of the homemakers personally thought fresh pork was tasty, it was not a meat they were likely to choose as the

entree for guests whose meat preferences were unknown.

Lamb was studied in less detail than the other meats cited. It was the low meat on the totem pole, in terms of household servings.

Many infrequent users said it was too expensive. Nonusers often disliked its taste or odor. However, many of those who did not use lamb admitted that their parents had given them little or no opportunity to acquire a taste for it at family meals.

Consumers' complaints about meat in general or the way it was sold tended to focus on packaging.

Many felt prepackaging interfered with their ability to judge meat quality because they couldn't see the underside.

Most homemakers also shied away from the notion of buying frozen meat at the store mainly because they couldn't judge its freshness and quality. (21)



## Meditations at the Meat Counter

## Non-Leather Shoes Walk Away With Some of Leather's Market

Bootblacks are fast going out of business; the no-polish shoe has numbered their days. And it's also cut sharply into our use of leather.

Leather substitutes are going into more parts of shoes and more pairs of shoes than ever before.

Soles succumbed to substitutes first. Leather lowers started losing ground in the late 1940's. Now only a fourth of the shoes being made are soled with leather and an even smaller proportion are heeled with hide.

Uppers haven't been upset yet. The sides and tops of most U.S. shoes are still leather. But poromerics, vinyl or sheet plastics, and fabrics are catching on fast.

Consumers apparently like the new shoe materials because of their easy upkeep. Most are permanently polished, colorfast, water repellent, and highly durable.

Poromerics and similar substitute materials have gained 5 percent of the side-upper leather market since 1966. If this trend continues, only about 50 percent of total shoe production in 1975 will have leather uppers. (22)

## King Cotton Is Dethroned in '68 As Manmade Fiber Use Soars

Cotton, long king of U.S. textiles, was forced to abdicate its top spot to manmade fibers in 1968.

With 52 percent of total fiber consumption in 1968, manmades moved well up front of cotton. Its share was 43 percent. In 1967, cotton still claimed 50 percent of domestic consumption while the manmades' share was 46 percent.

Per person, cotton usage in 1968 totaled 22.0 pounds—the smallest it's been since 1963. In

contrast, our per capita consumption of manmades was a record high 26.6 pounds.

Noncellulosics (the manmade fibers other than rayon and acetate) have been coming on especially strong in recent years. In 1968, per capita usage came to 18.0 pounds—a third more than in 1967 and four times more than consumption in 1960.

Wool use per person, at 2.3 pounds in 1968, was close to year-earlier levels. (23)

## Breakdown of Retail Food Dollar Shows Farmers Getting 39 Cents

Of every consumer dollar spent for U.S. farm foods in retail stores in 1968, an average of 39 cents went to farmers.

All farm products need various amounts of processing and packaging, transportation, and other marketing services. The cost of performing these services amounted to about three-fifths of the consumer's retail food dollar.

Farmers received only about a fifth of the consumer's dollar spent for bakery and cereal pro-

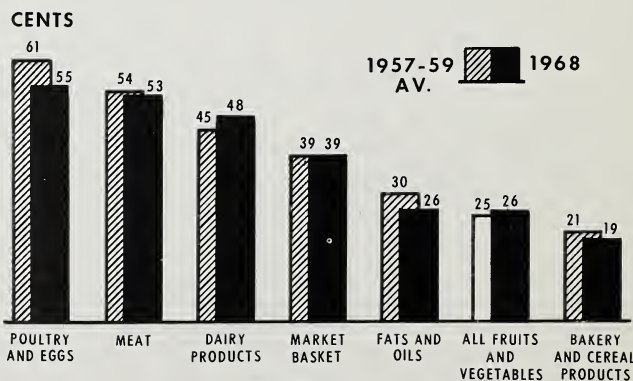
ducts and fruits and vegetables in 1968. These foods incur high processing, packaging, and distribution costs. Thus, farmers receive less of the dollar spent for these products.

On the other hand, more than half the consumer's retail dollar spent for poultry and eggs and other animal products went to farmers in 1968, because the cost of farm inputs is higher relative to marketing costs.

Slight changes have occurred in the share that producers of particular products get. Between 1957-59 and 1968, the farmer's share of the consumer's dairy dollar and fruit and vegetable dollar went up while the farmer's share of other major food groups declined. Changes in the farmer's share reflect changes in prices received by farmers and marketing costs.

Prices received by farmers and marketing costs for the total market basket of farm foods have changed by roughly the same percentage during the past decade. Thus, the farmer's share of the consumer's food dollar averaged the same in 1968 as it did back in 1957-59. (24)

## FARMER'S SHARE OF CONSUMER'S RETAIL FOOD DOLLAR, BY FOOD GROUP



1968 PRELIMINARY.

U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 5663-68 (11) ECONOMIC RESEARCH SERVICE



CORPORATIONS HAVING AGRICULTURAL OPERATIONS: PRELIMINARY REPORT II. G. W. Coffman and W. H. Scofield, Farm Production Economics Division. AER-156.

Within the 25-State area covered by this report, the major type of outside corporation with substantial crop operations was found in areas having the potential for land clearing, drainage, and development. Such operations were found chiefly in the Atlantic Coastal Plain extending from North Carolina to and including Florida, and in the Delta portions of Arkansas, Mississippi, and Louisiana.

CHARACTERISTICS OF HUMAN RESOURCES IN THE RURAL SOUTHEAST COASTAL PLAIN: WITH EMPHASIS ON THE POOR. J. V. McElveen, Economic Development Division. AER-155.

This study of human resources in a 10-county area of the Northeast Coastal Plain of South Carolina disclosed severe and persistent problems—problems that preclude easy or quick solutions. Implied needs of the rural population are more jobs; improved housing; greater educational opportunities for youth; training, retraining, and job placement services for adults; and programs of public assistance.

RESEARCH PUBLICATIONS ON DAIRY MARKETING ECONOMICS: AN ANNOTATED BIBLIOGRAPHY. Marketing Economics Division. ERS-406.

This is a list of dairy marketing research materials published by the Economic Research Service and predecessor agencies since World War II.

APPRAISAL OF FEDERAL ALL-RISK CROP INSURANCE COVERAGES AND PREMIUMS IN NORTH DAKOTA, EFFECTIVE WITH THE 1969 CROP YEAR. H. W. Delvo and D. O. Anderson, Farm Production Economics Division, in cooperation with the



## RECENT PUBLICATIONS

*The publications listed here are issued by the Economic Research Service and cooperatively by the State universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from The Farm Index, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained only by writing to the issuing agencies of the respective States.*

North Dakota Agricultural Experiment Station. N. Dak. Agr. Expt. Sta. AER-65.

The coverage provided by the Federal all-risk crop insurance program appears adequate in relation to production costs for all crops, except corn for grain, insured in the State with the low or medium per bushel price selection covering production costs. There are areas in the State where the high per bushel price selection is needed to meet production costs.

PRECIPITATION PROBABILITIES FOR SELECTED LOCATIONS IN LOUISIANA. J. B. Penn, A. M. Heagler, and B. Bolton, Farm Production Economics Division, in cooperation with the Louisiana State Agricultural Experiment Station. La. Agr. Expt. Sta. D. A. E. Res. Rept. 392.

Rainfall bears a critical rela-

tionship to many agricultural activities. Farmers and others frequently need to consider rainfall in planning for the future. This report provides rainfall probability figures for various levels of rainfall at several locations in Louisiana.

SOCIOECONOMIC FACTORS AFFECTING PARTICIPATION IN WATER-ORIENTED OUTDOOR RECREATION. D. Brewer, Missouri Agricultural Experiment Station, and G. A. Gillespie, Natural Resource Economics Division. ERS-403.

Accurate estimates of recreational demands are of primary importance in planning development of outdoor recreation facilities by State and Federal governments, as well as by private developers. As a result of pressures created by population growth, higher incomes, shorter workweeks, more leisure time, improved highways, and more automobiles, there is an increasing demand for more and better opportunities to enjoy the outdoors.

STORE TEST OF EUDA CHEESE IN FOUR SUPERMARKETS IN THE WASHINGTON, D.C., SUBURBS. H. H. Moede and N. Siegle, Marketing Economics Division. MRR-846.

This limited-scale study was conducted to determine whether consumers would purchase a new skim milk semi-soft cheese if it were available in retail stores. Study results indicated that EUDA could be a profitable addition to an established commercial cheese producer's line. (See June 1969 Farm Index.)

THE DOMESTIC WOOL MARKETING SYSTEM. C. A. O'Dell, Marketing Economics Division. ERS-400.

During the past 20 years, the domestic wool industry declined in almost every phase of production, marketing, and processing. The decline reflects, among other things, lack of information on improving the quality and preparation of wool clips.

## Addresses of State experiment stations:

This ready reference list for readers wishing to order publications and source material published through State experiment stations will be updated again in December.

STATE	CITY	ZIP CODE	STATE	CITY	ZIP CODE
ALABAMA	Auburn	36830	MISSOURI	Columbia	65201
ALASKA	College	99701	MONTANA	Bozeman	59715
	Palmer	99645	NEBRASKA	Lincoln	68503
ARIZONA	Tucson	85721	NEVADA	Reno	89507
ARKANSAS	Fayetteville	72701	NEW HAMPSHIRE	Durham	03824
CALIFORNIA	Berkeley	94720	NEW JERSEY	New Brunswick	08903
	(317 University Hall		NEW MEXICO	Las Cruces	88001
	2200 University Ave.)			(P.O. Box 3-BF)	
	Davis	95616	NEW YORK	Ithaca	14850
	Los Angeles	90024		(Cornell Station)	
	Riverside	92502		Geneva	14456
	(Citrus Research Center)			(State Station)	
COLORADO	Fort Collins	80521	NORTH CAROLINA	Raleigh	27607
CONNECTICUT	New Haven	06504		(Box 5847)	
	(P.O. Box 1106)		NORTH DAKOTA	Fargo	58102
	Storrs	06268		(State University Station)	
DELAWARE	Newark	19711	OHIO	Columbus	43210
FLORIDA	Gainesville	32601		(Ohio State University)	
GEORGIA	Athens	30601		Wooster	44691
	Experiment	30212	OKLAHOMA	Stillwater	74074
	Tifton	31794	OREGON	Corvallis	97331
HAWAII	Honolulu	96822	PENNSYLVANIA	University Park	16802
IDAHO	Moscow	83843		(106 Armsby Building)	
ILLINOIS	Urbana	61801	PUERTO RICO	Rio Piedras	00928
INDIANA	Lafayette	47907	RHODE ISLAND	Kingston	02881
IOWA	Ames	50010	SOUTH CAROLINA	Clemson	29631
KANSAS	Manhattan	66502	SOUTH DAKOTA	Brookings	57006
KENTUCKY	Lexington	40506	TENNESSEE	Knoxville	37901
LOUISIANA	Baton Rouge	70803	TEXAS	College Station	77843
	(Drawer E		UTAH	Logan	84321
	University Station)		VERMONT	Burlington	05401
MAINE	Orono	04473	VIRGINIA	Blacksburg	24061
MARYLAND	College Park	20742	WASHINGTON	Pullman	99163
MASSACHUSETTS	Amherst	01002	WEST VIRGINIA	Morgantown	26506
MICHIGAN	East Lansing	48823	WISCONSIN	Madison	53706
MINNESOTA	St. Paul	55101	WYOMING	Laramie	82070
	(St. Paul Campus)			(University Station	
MISSISSIPPI	State College	39762		Box 3354)	

### Numbers in parentheses at end of stories refer to sources listed below:

1. L. A. Reuss, Yield Response and Economic Feasibility of Sprinkler Irrigation of Citrus, Central Florida; Fla. Agr. Expt. Sta. (M\*); 3. Theodore Eiebers, Robert Jenkins, and Austin Fox, DDT Used in Farm Production, AER-158 (P); 4. Allen G. Smith (SM); 5. Farm Production Economics Division, Changes in Farm Production and Efficiency: A Summary Report, 1969, Stat. Bul. 233 (Rev. June '69) (P); 6. The Livestock and Meat Situation, LMS-167 (P); 7. Walter L. Ferguson, Farm Labor Used for Fruits and Tree Nuts, 1964, SB-436 (P); 8. Wayne D. Rasmussen and Vivian D. Wiser (SM); 9. Wayne D. Rasmussen (SM); 10. Robert L. Hurst, Rural Housing in the Northeast Coastal Plain Area of South Carolina (M); 11. and 12. Thomas F. Hady (SM); 13. R. C. McElroy, The Hired Farm Working Force of 1968: A Statistical Report (M); 14. Kenneth R. Farrell (SM); 15. Kenneth R. Farrell, A Look Ahead for the Agribusiness Industries (S); 16. Floyd A. Lasley (SM); 17. Dale L. Shaw and others, Cost of Commercial Drying, Storing, and Handling Rough Rice, 1965-66, ERS-407 (P); 18. J. C. Eiland,

Distribution of Rice in the United States, ERS-408 (P); 19. Norris T. Pritchard (SM); 20. Reed E. Friend and G. Robert Butell, Production, Consumption, and Trade of Coarse Grains—Developments and Prospects for Selected Foreign Countries and Areas, ERS-For. 272 (P); 21. Margaret Weidenhamer, Edward M. Knott, and Lorna R. Sherman, Homemakers' Opinions About Selected Meats—A Nationwide Survey (M); 22. Marketing Economics Division, "Substitutes for Leather," Synthetics and Substitutes for Agricultural Products—A Compendium, Misc. Pub. 1141 (P); 23. Cotton Situation, CS-240 (P); 24. Marketing Economics Division, Food Costs: Retail, Farm, Marketing, Misc. Pub. 1133 (P); 25. Alan R. Bird, Regional Development Strategies in Relation to Rural People—Some Alternatives and Their Implications (S).

Speech (S); published report (P); unpublished manuscript (M); special material (SM); \*State publications may be obtained only by writing to the experiment station or university cited.



# ECONOMIC TRENDS

ITEM	UNIT OR BASE PERIOD	'57-'59 AVERAGE	1968		1969		
			YEAR	MAY	MARCH	APRIL	MAY
<b>Prices:</b>							
Prices received by farmers	1910-14=100	242	261	260	271	271	282
Crops	1910-14=100	223	229	236	228	227	237
Livestock and products	1910-14=100	258	288	281	308	309	321
Prices paid, interest, taxes and wage rates	1910-14=100	293	354	354	369	372	374
Family living items	1910-14=100	286	335	335	347	349	351
Production items	1910-14=100	262	292	293	302	303	306
Parity ratio		83	74	73	73	73	75
Wholesale prices, all commodities	1957-59=100	—	108.7	108.5	111.7	111.9	112.8
Industrial commodities	1957-59=100	—	109.0	108.6	112.0	112.1	112.2
Farm products	1957-59=100	—	102.2	103.6	106.5	105.6	110.5
Processed foods and feeds	1957-59=100	—	114.1	113.6	116.4	117.3	119.4
Consumer price index, all items	1957-59=100	—	121.2	120.3	125.6	126.4	—
Food	1957-59=100	—	119.3	118.8	122.4	123.2	—
<b>Farm Food Market Basket: <sup>1</sup></b>							
Retail cost	Dollars	983	1,118	1,114	1,141	1,148	—
Farm value	Dollars	388	435	436	460	466	—
Farm-retail spread	Dollars	595	683	678	681	682	—
Farmers' share of retail cost	Percent	39	39	39	40	41	—
<b>Farm Income: <sup>2</sup></b>							
Volume of farm marketings	1957-59=100	—	126	97	100	94	100
Cash receipts from farm marketings	Million dollars	32,247	44,065	2,981	3,180	3,105	3,400
Crops	Million dollars	13,766	18,424	835	999	898	900
Livestock and products	Million dollars	18,481	25,641	2,146	2,181	2,207	2,500
Realized gross income <sup>3</sup>	Billion dollars	—	<sup>5</sup> 50.8	—	51.8	—	—
Farm production expenses <sup>3</sup>	Billion dollars	—	<sup>5</sup> 35.9	—	37.0	—	—
Realized net income <sup>3</sup>	Billion dollars	—	<sup>5</sup> 14.9	—	14.8	—	—
<b>Agricultural Trade:</b>							
Agricultural exports	Million dollars	4,105	<sup>5</sup> 6,228	492	517	602	—
Agricultural imports	Million dollars	3,977	<sup>5</sup> 5,028	434	475	488	—
<b>Land Values:</b>							
Average value per acre	1957-59=100	—	—	<sup>6</sup> 176	179	—	—
Total value of farm real estate	Billion dollars	—	—	<sup>6</sup> 199.3	202.6	—	—
<b>Gross National Product: <sup>3</sup></b>							
Consumption <sup>3</sup>	Billion dollars	457.3	860.6	—	903.3	—	—
Investment <sup>3</sup>	Billion dollars	294.2	533.8	—	557.4	—	—
Government expenditures <sup>3</sup>	Billion dollars	68.0	127.7	—	139.0	—	—
Net exports <sup>3</sup>	Billion dollars	92.4	197.2	—	206.9	—	—
	Billion dollars	2.7	2.0	—	0	—	—
<b>Income and Spending: <sup>4</sup></b>							
Personal income, annual rate	Billion dollars	365.3	685.8	678.2	727.7	731.2	735.0
Total retail sales, monthly rate	Million dollars	17,098	28,309	28,158	28,915	29,370	29,434
Retail sales of food group, monthly rate	Million dollars	4,160	6,106	6,117	6,284	6,263	—
<b>Employment and Wages: <sup>4</sup></b>							
Total civilian employment	Millions	63.9	75.9	75.9	77.8	77.6	77.3
Agricultural	Millions	5.7	3.8	3.9	3.7	3.7	3.8
Rate of unemployment	Percent	5.8	3.6	3.6	3.4	3.5	3.5
Workweek in manufacturing	Hours	39.8	40.7	40.9	40.8	40.8	40.8
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	3.01	2.99	3.13	3.15	3.17
<b>Industrial Production: <sup>4</sup></b>							
	1957-59=100	—	165	164	171	172	173
<b>Manufacturers' Shipments and Inventories: <sup>4</sup></b>							
Total shipments, monthly rate	Million dollars	28,745	50,310	50,014	53,078	53,257	—
Total inventories, book value end of month	Million dollars	51,549	88,579	85,278	90,317	91,014	—
Total new orders, monthly rate	Million dollars	28,365	50,597	49,650	53,283	54,539	—

<sup>1</sup> Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1959-61—estimated monthly. <sup>2</sup> Annual and quarterly data are on 50-State basis. <sup>3</sup> Annual rates seasonally adjusted first quarter. <sup>4</sup> Seasonally adjusted. <sup>5</sup> Preliminary. <sup>6</sup> As of November 1, 1968.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).



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### *The In Group*

Outmigration from an area is usually taken as an omen of economic ill health. But immigration, or the lack of it, is more often the real tip-off to the economic health of a community.

Many of our Nation's soundest economic areas lose plenty of people each year. San Francisco, for example, recently has had rates of outmigration that virtually match those from the Black Belt of Alabama. The difference between the two areas is that people move into San Francisco as fast as others move out. And that's not the case in Alabama.

Many depressed rural areas can best cure their depopulation problems not by trying to arrest outmigration but by trying to encourage immigration, particularly of skilled workers.

Economically developed areas contain a vast reservoir of potential migrants—skilled people who will pick up and move anywhere in the Nation if it means a better job, a better income, a better place to live.

This mobile group moves mostly from one developed (and usually urban) area to another, because that's where the best job opportunities are.

But many might welcome a change from city to country living if rural areas provided them wage and salary incentives, and community and social services comparable to those they already enjoy.

Migration is a sign of a healthy economy—when there's traffic on both sides of a two-way street, wherever it is. (25)

# THE FARM INDEX

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